

(57) Abstract

A multi-user receiver which uses at least two antenna elements and in which the influence of interference is reduced, the receiver comprises: means (200) for pre-filtering a wideband antenna signal, the pre-filtering means being determined on the basis of a spatial covariance matrix estimate, which spatial covariance matrix estimate is obtained from wideband antenna signals by sampling, arranging sampled values into a signal vector and by multiplying the signal vector by its conjugate transpose vector, means (210, 218) for removing the whitening from signals of predetermined users by using an inverse matrix of the matrix used in the whitening filter, means (202, 204, 206, 208, 210) for performing multi-path combining and multi-antenna combining.

(Figure 2)